

## DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

AD-A207 184

1b. RESTRICTIVE MARKINGS

3. DISTRIBUTION/AVAILABILITY OF REPORT

DISTRIBUTION STATEMENT A

Approved for public release

2b. DECLASSIFICATION/DOWNGRADING SCHEDULE

4. PERFORMING ORGANIZATION REPORT NUMBER(S)

DODPOPTR/AYD89002

5. MONITORING ORGANIZATION REPORT NUMBER(S)

6a. NAME OF PERFORMING ORGANIZATION

ARDEC

6b. OFFICE SYMBOL

SMCAR-AEP

7a. NAME OF MONITORING ORGANIZATION

6c. ADDRESS (City, State, and ZIP Code)

Picatinny Arsenal, New Jersey 07806-5000

7b. ADDRESS (City, State, and ZIP Code)

8a. NAME OF FUNDING/SPONSORING  
ORGANIZATION8b. OFFICE SYMBOL  
(If applicable)

9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

8c. ADDRESS (City, State, and ZIP Code)

10. SOURCE OF FUNDING NUMBERS

PROGRAM  
ELEMENT NO.PROJECT  
NO.TASK  
NO.WORK UNIT  
ACCESSION NO.

11. TITLE (Include Security Classification)

Performance Oriented Packaging Testing of Flexible Linear Shaped Charges in Wood Box (U)

12. PERSONAL AUTHOR(S)

Sniezek, Frank, Michael

13a. TYPE OF REPORT  
FINAL

13b. TIME COVERED

FROM \_\_\_\_\_ TO \_\_\_\_\_

14. DATE OF REPORT (Year, Month, Day)

01 April 1989

15. PAGE COUNT

16. SUPPLEMENTARY NOTATION

17. COSATI CODES

FIELD GROUP SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)

Performance Oriented Packaging, POP, Flexible Linear  
Shaped Charge

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This report contains the testing and test results performed on the Flexible Linear  
Shaped Charge packaged in a wood box.

DTIC  
ELECTE  
S APR 26 1989 D  
D <sup>CS</sup> D

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT

☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT. ☐ DTIC USERS21. ABSTRACT SECURITY CLASSIFICATION  
Unclassified

22a. NAME OF RESPONSIBLE INDIVIDUAL

Sniezek, Frank M.

22b. TELEPHONE (Include Area Code)

201-724-2156

22c. OFFICE SYMBOL

SMCAR-AEP

89 4 24 124

I. REPORT NUMBER: DODPOPTR/AYD89002

II. TITLE: Performance Oriented Packaging Testing of Flexible Linear  
Shaped Charges in Wood Box

AUTHOR: Frank M. Sniezek

PERFORMING ACTIVITY: ARDEC

ADDRESS: Department of the Army  
Armament Research, Development, and Engineering Center  
HQ. U.S. Armament, Munitions, and Chemical Command  
Picatinny Arsenal, New Jersey 07806-5000

DATE: 05 April 1989

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	



1. DATA SHEET

CONTAINER:

Type: Box  
UN Code: 4C1  
Nomenclature: Package, Shipping and Storage (For Charge,  
Shaped, Linear, Flexible)  
Specification Number: N/A  
Drawing Number: 9332432  
Material: Natural Wood  
Capacity: 8.1 lbs  
Dimensions: 50.25 x 5.50 x 2.06  
Tare Weight: 7.8 lbs

PRODUCT:

Name: Flexible Linear Shaped Charge  
Drawing Number: See Table Below.  
United Nations Number: 0439  
United Nations Packing Group: II  
Physical State: Solid  
Amount per Container: See Table Below.

<u>DRAWING NUMBER</u>	<u>AMOUNT PER CONTAINER</u>
5206212-1	6
5206212-2	6
5206212-3	6
5206212-4	6
5206212-5	6
5206213-1	3
5206213-2	3
5206213-3	3
5206213-4	3
5206213-5	3
5206213-6	3

## 2. BACKGROUND:

This report contains the testing and test results performed on the Flexible Linear Shaped Charge packaged in a wood box. The testing was performed exclusively using inert charges (5206213-3) weighted up to the heaviest charges (5206213-6) packaged IAW 9332432 for Performance Oriented Packaging Certification. Tests were performed in accordance with Performance Oriented Packaging test regulations.

## 3. TEST:

3.a. The containers were dropped once each from 7 feet (2.1 meters) in lieu of UN requirements of 4 feet (1.2 meters). The containers were dropped on a 3 inch solid steel plate reinforced by 18 inches of crushed rock in 6 different orientations. The tests were conducted at 3 temperatures (6 total containers). The orientations and temperatures were as follows:

TOP: +160° F  
BOTTOM: -65° F  
SIDE: Ambient  
RIGHT END: Ambient  
45 ON RIGHT END: +160° F  
LEFT END: -65° F

Note: This exceeds the UN requirement which is 5 containers dropped once in 5 orientations (bottom, top, long side, and short side-end) at ambient temperature.

3.b. Stacking test was performed by adding a weight equivalent to a 16' (4.9 meters) stack height for 48 hours at 23 °C (75° F) in lieu of 3 meters (9.8 feet) at 24 hours.

## 4. RESULTS:

The containers passed all tests. None of the contents of the containers were discharged or spilled. They are considered safe for international transportation in accordance with Performance Oriented Packaging Regulations. ~~EX~~

Reference Material: United Nations "Transport of Dangerous Goods",  
Fourth Edition